

**ABSTRACT OF THE DISCLOSURE**

A peptidyl nitrile of the general formula (I) or a pharmaceutically acceptable salt or prodrug thereof, is capable of selectively inhibiting dipeptidyl-peptidase I (DPP-I), also known as cathepsin C. A compound of the invention is useful as an active substance for the treatment of inflammation, type 2 diabetes, asthma, severe influenza, respiratory syncytial virus infection, CD8 T cell inhibition, inflammatory bowel diseases, psoriasis, atopic dermatitis, Papillon Lefevre syndrome, Haim Munk syndrome, gum disease, periodontitis, rheumatoid arthritis, Huntington's disease, Chagas' disease, Alzheimer's disease, sepsis or for application in target cell apoptosis.